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ABSTRACT

A multimedia training concept was developed which aims at reducing misunderstandings and thus avoiding conflicts by fostering a more differentiated understanding of utterances. Based upon the principles of the cognitive apprenticeship approach, a tool--the multimedia learning environment "CaiMan"--presents video sequences of dyadic conflict situations to the subjects. The subjects have to analyze the utterances of both conversational partners (persons A and B in the video sequence) according to three functions--appeal, expression, and representation. A study was conducted to test the effectiveness of the training approach--the training aims at improving the individual's ability to analyze and understand conversational utterances as well as their accompanying nonverbal signals. Subjects were 27 students who participated in a communication training course at the Technical University of Munich. Training in analyzing conversational utterances (of persons A and B in the video) consisted of four training sessions and two testing sessions (the introductory and the final). Looking at the quality of analysis of the conversational utterances, it was found that a significant improvement from the introductory to the final session took place. Findings suggest that the majority of the subjects were convinced that they could improve their own everyday interpersonal interactions using the skills they had acquired in the training. (NKA)

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To Avoid Conflicts

A Multimedia Training Concept for Reflected Communication

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Information about the learning environment and the integrated education and training concept CCT it is embedded in:
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Try to recall the last conversations you had that ended in a conflict. Could these conflicts have been avoided? When you reflect on what happened, you might find that some of the conflicts stemmed from misunderstandings. In these cases what you understood differed from what your conversational partner had meant to convey with his/her utterances. The multimedia training concept presented here aims at reducing misunderstandings and thus avoiding conflicts by fostering a more differentiated understanding of utterances.

Producing and understanding utterances is something we have been doing for most of our lives. It therefore is no wonder that a lot of the skills involved in these processes are rather automated and that we have developed certain habits in reacting to a given stimulus or situation in a particular way. Many times we are convinced that we have understood everything our conversational partner had intended to say, although we have only processed part of the information. Our understanding of our conversational partner's utterance provides the basis for our communicative reaction. Consequently, not considering part of the information given may lead to misunderstandings, which in turn will cause reactions that are incomprehensible in the eyes of our conversational partner. He/she might then feel misunderstood by our utterance or reaction which again might result in a conflict. Let us try to demonstrate this to you by using this following example.

In a car nearing a crossing, the following dialog takes place: The husband says to his wife who is driving the car: "The traffic lights are red.". As a reaction to this statement his wife explodes: "You always tell me how to drive. I'm able to drive without you constantly intervening. If you don't have confidence in the way I drive, you might as well walk home!". If we look at this scene, we see that the situation has escalated rapidly. What seems to have happened is that the woman felt criticized by the remark of her husband and that this particular understanding of his utterance had caused her to react rather aggressively. In order to avoid such aggressive reactions, which might lead to a conflict, it seems necessary to develop a more differentiated understanding of utterances. However this is not as easy as it seems to be. Why? In our example, the wife might have repeatedly experienced that such an utterance in a specific context, accompanied by a specific intonation and perhaps with specific nonverbal behaviors, means "Slow down and brake!". In her reaction to his utterance she didn't realize or consider that her husband was not nervous at all. He was rather speaking very calmly and only wanted to inform her about the state of the traffic lights. The woman's reaction in the present situation was dominated by a previously learned way of analyzing utterances, i.e. a communicative habit was activated. This reaction was triggered automatically and was not appropriate for the current situation since it ignored part of the information and rather constituted an automated reaction to another situation (cf. Ogden & Richards, 1969).

Using language in communicative situations involves highly automated skills (Leont'ev, 1981). The advantage of automated skills is that they enable quick reactions in communicative interactions and do not impose a high cognitive load on the working memory. Their disadvantage, however, is that they are not flexible enough for dealing with critical situations or conflicts that deviate from those situations in which they are functional. Usually,

the processes involved – starting from the identification of sounds to the analysis or understanding of an utterance and the final judgement of an utterance – take place automatically (Herrmann, 1992). In order to change the processes, a de-automation, that is a change of the learners' "listening" habits, has to occur (Antos, 1997). The process selected for de-automation in this training is the analysis of an utterance. The individual has to become aware of how he/she analyzes utterances, reflect the reasons of this analysis as well as the consequences thereof and – if necessary – change his/her way of analysing utterances. The aim of the training is to bridge the gap between what the speaker meant and what the listener understood.

In most real communicative situations, it would be impossible to pay attention to all these aspects, since the individual would have to respond to the utterances of his/her conversational partner immediately. Therefore, there is a need for a learning environment which integrates communicative situations and provides possibilities for reflecting upon one's own behavior at the same time. According to the situated character of language use and with reference to constructivistic learning theories, the learning environment should mirror the cognitive tasks of real communicative situations (Collins, 1996; Radinsky, 1998). Based upon the principles of the cognitive apprenticeship approach (Collins, Brown & Newman, 1989), we developed a tool – the learning environment CaiMan© – which contains two crucial features. First, it takes into account some major characteristics of language in use: The utterances are presented not as written texts, but in their "natural format" – providing both auditory as well as visual information. Second, it allows the learner to interrupt the normal automaticity of his/her analysis of utterances, thus consciously think about his/her own analyses and reflect them by comparing his/her own analyses with those of an expert. Due to the dynamicity of the processes of analysis, it would be difficult, if not impossible, to interrupt and reflect utterances in normal communicative situations in which analyses are conducted automatically and stay implicit and unaware.

The learning environment CaiMan© presents video sequences of dyadic conflict situations to the subjects (see Figure 1). The subjects have to analyze the utterances of both conversational partners (persons A and B in the video sequence) according to the three functions - *appeal*, *expression* and *representation* - that speech serves in communicative situations according to Bühler (1934) (see also "Methods").

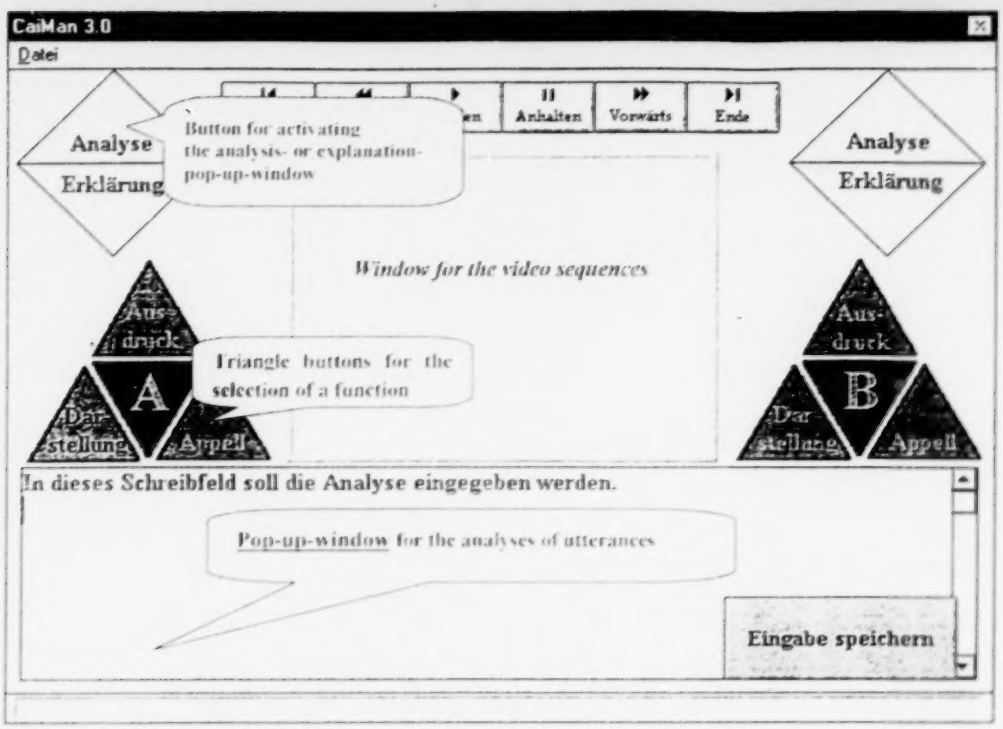

Figure 1. The learning environment CaiMan© with its different functionalities.

The learning environment is embedded in an education and training concept which spans four semesters. The training (at University of Munich) conveys communication, moderation and coaching skills. Figure 2 displays the four training modules.

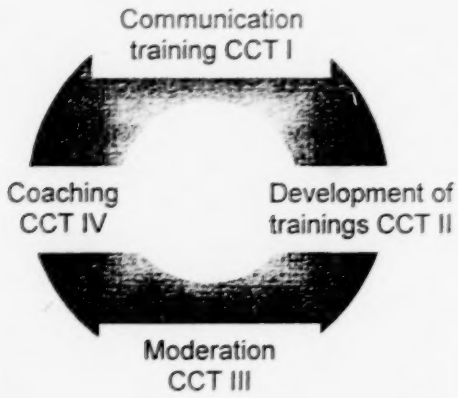

Figure 2. The training modules of the integrative education and training concept CCT (Constructivistic Communication Training).

The first module of the training teaches the basic skills of person-centered communication. This training consists of the speech receptive training (pertaining to the comprehension of utterances) using the learning environment CaiMan© and two speech productive training segments (pertaining to speaking) in form of group session. Important goals of this module are to sensitize the students for communicative problems, to teach them a differentiated,

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reflected analysis of communicative utterances and finally to react in a constructive way to the utterances of others. The first training module is depicted in Table 1.

Table 1.
The first training module

Session format	Content	Duration
Group session I	Sensitization for communicative processes	2 days
Individual sessions with the learning environment CaiMan©	Analyzing the communicative utterances of others	6 x 1 hour
Group session II	Reacting to the utterances of others in a constructive way	2 days

The central concern of the second training module is the acquisition of the competences necessary for conducting trainings. In addition to the expansion and consolidation of the communicative skills acquired during the first training module, the participants learn to develop trainings for specific target groups.

The third module is focused on the moderation of trainings and seminars. The participants have to implement the communicative and didactic skills they have acquired during the first two training modules by conducting trainings and seminars.

The focus of the last module is developing self-management competences as a trainer, planning and discussing approaches of educational controlling and conducting cooperative supervision.

Research Questions

A study was conducted in order to test the effectiveness of the training approach. As detailed above, the training aims at improving the individual's ability to analyze and understand conversational utterances as well as their accompanying nonverbal signals. Whether the training has had any effect on the individual's everyday interaction behavior cannot be determined easily, since the individual's reactions do not only depend on his/her analysis and understanding of the other partner's utterances, but are influenced by a great many of other factors as well, such as the perception of the situation, the attitude towards the partner, etc. Therefore it was decided to use the individual's own judgement of the possibility of applying the training contents to his/her everyday interpersonal interactions as an indicator of the transferability of the acquired skills.

The following research questions are investigated:

(1): Does the training lead to an improvement in the analyses of conversational utterances?

(2): Do the subjects perceive a connection between the skills acquired in the training and their everyday interpersonal interactions?

Methods

The subjects were 27 students who participated in a communication training course at the Technical University of Munich.

The subjects worked individually with a multimedia learning environment into which video sequences of dyadic conflict situations were embedded.

The task of the subjects was to analyze the utterances of both conversational partners (persons A and B in the video sequence) according to the functions that speech serves in communicative situations which Bühler (1934) had distinguished into: *appeal*, *expression* and *representation*. In using this model the subject asks himself/herself the following questions: "What does the speaker want the listener to do?" (*appeal*), "What does the speaker express about himself/herself?" (*expression*) and "About what objects or facts does the speaker inform the listener?" (*representation*). The analysis of each function and its explanation was entered by the subject in the text field provided on the computer screen. Immediately after having entered his/her own analysis and explanation, the subject could activate the respective analysis and explanation of an expert. Comparing his/her analysis and explanation with the expert's provided the subject with an additional possibility to reflect his/her own analysis and explanation. These steps were repeated for all three functions and both conversational partners.

The training in analyzing conversational utterances consisted of four training sessions and two testing sessions (the introductory and the final session), each with an average duration of one hour. In each testing session as well as in the training sessions, the learners were presented with two short video sequences (dialog between persons A and B with one conversational turn) which they had to analyze. The difference between the testing and training sessions was that only in the training sessions the expert's analyses and explanations were available to the subjects.

The analysis of the conversational utterances was assessed at the two testing sessions. The quality of analysis was determined by two experts who rated the agreement (number of correct arguments) between the expert's and the subject's analyses (inter-rater-reliability r= .78).

In a questionnaire, administered at the end of the introductory session, the subjects judged how convinced they were that they could apply the training contents to their everyday interpersonal interactions after the training. This rating was given on a 7-point scale, ranging from +3 (agree) to –3 (disagree).

In order to test research question (1) a paired t-test was used. The quality of analysis in the introductory session and the final session were compared.

Research question (2) was investigated by testing the mean values found in the ratings of the individuals against 0 (zero) using a one-sample t-test.

Results

Looking at the quality of analysis of the conversational utterances (research question (1)), we could find that a significant improvement from the introductory ($M = 0.28$, $SD = 0.17$) to the final ($M = 0.36$, $SD = 0.13$) session took place ($t\,(26) = -2.24$, $p < 0.05$).

Regarding research question (2) it was found that the majority of the subjects was convinced that they could improve their own everyday interpersonal interactions using the skills they had acquired in the training. The mean proved to differ significantly from the neutral value 0 ($M = 0.81$, $SD = 1.52$), $t\,(26) = 2.79$, $p < 0.05$.

Discussion

The results of this study have demonstrated that the selected training approach is effective in terms of teaching students to improve their analyses of conversational utterances. At the end of the training, the subjects were better able to analyze and understand the utterances according to the information given.

In addition, it seems that the training might have effects exceeding the boundaries of the training itself. But this conclusion has to be drawn with caution, since it relies solely on the subject's own judgement about his/her improvement in his/her everyday interpersonal interactions as a result of the skills acquired in the training. Further testing in controlled environments would be required to determine whether the effect of the training indeed extends to the everyday communicative behavior of the subjects.

What effects could this training have on the example presented in the introductory section? When the husband says "The traffic lights are red", the wife having participated in the training and having learned to change her communicative habits would analyze his utterance according to the three functions (appeal, expression and representation). She would reflect her analysis as well as the basis thereof, and then realize that her husband speaks very calmly and only wants to inform her about the fact that the traffic lights are red. Thus, she would not understand his utterance as an attack on her competence, but would rather be able to critically reflect her analysis and react differently from how she would have prior to the training.

We can see that with this multimedia training program, we have a powerful tool that might help in preventing conflicts at their very roots: That is by fostering a more differentiated understanding, the likelihood of misunderstandings and thus ultimately of conflicts could be reduced.

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